

WHAT IS CLAIMED IS:

1. A method of testing an electronic component in which a predetermined load is set, which predetermined load is determined by a burn-in temperature, a burn-in voltage, and a burn-in period of time, and burn-in of the electronic component is carried out in such a manner that a load equal to the predetermined load is applied to the electronic component, the method comprising the steps of:

a first step of placing the electronic component having a negative resistance-temperature characteristic in a heating atmosphere such that the electronic component reaches a predetermined temperature, said predetermined temperature being lower than the burn-in temperature;

a second step of supplying constant current to flow through the electronic component so that the predetermined temperature of the electronic component is controlled to be increased to the burn-in temperature; and

a third step of comparing the voltage actually applied to the electronic component to the burn-in voltage, correcting the burn-in time-period based on the comparison to determine a corrected burn-in time-period, and applying constant current to flow through the electronic component based on the corrected burn-in time-period.

2. A method according to Claim 1, wherein, in the second step, the voltage applied to the electronic component is monitored while the constant current flows through the electronic component, and the burn-in time-period is determined based on results of the monitoring.

3. A method according to Claim 1, wherein the first step includes the step of increasing the temperature of the electronic component to the predetermined temperature which is between a normal unheated temperature of the electronic component and the burn-in temperature and is nearer to the burn-in temperature, by using a temperature-increasing mechanism.

4. A method according to Claim 1, wherein the electronic component is a high dielectric constant multilayer ceramic capacitor.
5. A method according to Claim 1, wherein the predetermined temperature is about 60°C.
6. A method according to Claim 1, wherein the burn-in temperature is about 115°C.
7. A method according to Claim 1, wherein the burn-in time period is approximately 10 minutes.
8. A method according to Claim 1, wherein the electronic component experiences self-heating during the second step in response to the application of the constant current.
9. A method according to Claim 1, wherein a plurality of the electronic components are tested simultaneously according to the first step, the second step and the third step.
10. A method according to Claim 1, wherein the burning-in is stopped at the time when the total load applied to the electronic component becomes equal to the predetermined load.
11. A testing device with which a predetermined load is set, which is determined by a burn-in temperature, a burn-in voltage, and a burn-in time-period, and the burn-in of the electronic component is carried out in such a manner that a load that is equal to the predetermined load is applied to the electronic component, the testing device comprising:
 - a constant current source unit which supplies constant current to flow through the electronic component; and

a burn-in control unit for controlling the operation of the constant current source unit;

the burn-in control unit carrying out at least a temperature-increasing process during which the control unit drives the constant current source unit so that constant current flows through the electronic component, and thereby, the temperature of the electronic component is increased from a predetermined temperature to the burn-in temperature, and a burn-in controlling step at which the voltage actually applied to the electronic component is compared with the burn-in voltage, correction-calculation of the burn-in time-period is carried out based on comparison results, and the burn-in of the electronic component is carried out at the burn-in temperature in compliance with the corrected burn-in time-period.

12. A testing device for an electronic component according to Claim 11, further comprising a temperature-increasing mechanism which increases the temperature of the electronic component from a normal temperature to the predetermined temperature before the constant current is supplied from the constant current source unit to flow through the electronic component.

13. A testing device for an electronic component according to Claim 11, wherein the burn-in control unit includes a negative feedback control unit which compares actual current flowing through the electronic component with a set current and reduces the difference between the currents.

14. A testing device for an electronic component according to Claim 11, wherein the burn-in control unit includes a correction unit which measures the actual current flowing through the electronic component, calculates a correction amount required to equalize the actual current to the predetermined current based on results of the measurement, and corrects the actual current based on results of the calculation.

15. A testing device for an electronic component according to Claim 11, further comprising a constant current source unit which simultaneously supplies constant current to flow through a plurality of electronic components, respectively.

16. A testing device for an electronic component according to Claim 12, further comprising a charging/discharging unit including at least one of a turntable and an endless belt for charging and discharging the electronic component into and out of the temperature increasing mechanism.

17. A testing device for an electronic component according to Claim 11, wherein the constant current source unit includes a current control transistor, a resistor, and an operational amplifier.

18. A testing device for an electronic component according to Claim 11, wherein the burn-in control unit includes a voltage measuring unit.

19. A testing device for an electronic component according to Claim 11, wherein the electronic component is a high dielectric constant multilayer ceramic capacitor.

20. A testing device for an electronic component according to Claim 11, wherein the predetermined temperature is about 60°C and the burn-in temperature is about 115°C.